





PTO/SB/50 (4/98)

Approved for use through 9/30/2000. OMB 0651-0033 Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 995. no persons are required to respond to a collection of information unless it displays a valid OMB co 🗝 ol nur REISSUE PATENT APPLICATION TRANSMITTAL Attorney Docket No. 11872-022001/30-4016 US REI First Named Inventor Hasegawa et al. Address to: Original Patent Number 5,868,123 **Assistant Commissioner of Patents** Original Patent Issue **Box Patent Application** 9 February 1999 Washington, DC 20231 Date Express Mail EE 647 187 295 US Label No. **APPLICATION FOR REISSUE OF:** (check applicable box) □ Utility Patent ☐ Design Patent ☐ Plant Patent **APPLICATION ELEMENTS ACCOMPANYING APPLICATION PARTS** 1. X * Fee Transmittal Form (PTO/SB/56) 7. Foreign Priority Claim (35 U.S.C. 119) (Submit an original and a duplicate for fee processing) (if applicable) 2. Specification and Claims (amended, if appropriate) 8. X Information Disclosure Copies of IDS Citations Statement (IDS)/PTO-1449 Drawing(s) (Proposed amendments, if appropriate) 9. English Translation of Reissue Oath/Declaration □ Reissue Oath / Declaration (original or copy) Statement filed in prior application, Statement(s) status still proper and desired (PTO/SB/09-12) ். Original U.S. Patent 11. Preliminary Amendment Offer to surrender Original Patent (37 C.F.R. § 1.178) 12 . Return Receipt Postcard (MPEP 503) (PTO/SB/53 or PTO/SB/54) (Should be specifically itemized) ☐ Ribboned Original Patent Grant 13. Other: Status of Claims and Support for Claims Changes ☐ Affidavit / Declaration of Loss (PTO/SB/55) 6. Original U.S. Patent currently assigned? * Note for items 1&10: IN ORDER TO BE ENTITLED TO PAY ⊠ Yes ∏ No SAMLL ENTITY FEES. A SMALL ENTITY STATEMENT IS (If Yes, check applicable box(es)) REQUIRED (37 C.F.R. § 1.27). except if one filed in a prior ☐ Written Consent of all Assignees (PTO/SB/53 or 54) application is relied upon (37 C.F.R. § 1.28) □ 37 C.F.R. § 3.73(b) Statement □ Power of Attorney 14. CORRESPONDENCE ADDRESS ☐ Customer Number or Bar Code Label Or X Correspondence address below (Insert Customer No. Or Attach bar code label here) Charlotte H. Copperthite, Esq. Name Honeywell inc. 101 Columbia Road, AB2B Morristown, NJ 07962-1057 Address City Morristown State New Jersey Zip Code 07962-1057 Country U.S.A. Telephone (973) 455-2000 (973) 455-5469

| NAME (Print/Type) | Stephan J. Filipek, Fish & Richardson P.C. | Registration No. (Attorney/Agent) | | 33,384 | |
|-------------------|--|-----------------------------------|------|-----------------|--|
| Signature | Styphan Filipek | | Date | 8 FEBRUARY 2001 | |

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PTO/SB/56 (12-97)

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| REISSUE APPLICATION FEE TRANSMITTAL FORM | | | | | DOCKET NUMBER (Optional) 11872-022001/30-4016 US REISSUE | | | | |
|--|--|-------|-------------------------------------|---------------------|---|-----|----|---------------------------|----------------|
| Claims as Filed – Part 1 | | | | | | | | | |
| Claims in Patent For | | F | Number Filed in Reissue Application | (3) Number Extra | Small Entity | | | Other than a Small Entity | |
| | | | | | Rate | Fee | | Rate | Fee |
| (A) 7 | Total Claims (37 CFR 1.16(j)) | | 18 | | x \$= | | Or | x \$= | 0.00 |
| (C) 1 | Independent Claims (37 CFR 1.16(i)) | | 5 | 2 | x \$ = | | | x \$160= | 160.00 |
| Paris For (27 CFP 4 4C/L) | | | | | | | | \$710.00 | |
| Tota | | | | | l Filing Fee | \$ | | OR | \$870.00 |
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| If the entry in (D) is less than the entry in (C), write "0" in column 3. If the "Highest Number of Total Claims Previously Paid For" is less than 20, Write "20" in this space After any cancellation of claims If "A" is greater than 20, use (B-A); If "A" is 20 or less, use (B-20). If "A" is greater than 20, use (B-A); If "A" is 20 or less, use (B-20). If "Highest Number of Independent Claims Previously Paid For" or Number of Independent Claims in Patent (c). If "A" is greater than 20, use (B-A); If "A" is 20 or less, use (B-20). If "A" is greater than 20, use (B-A); If "A" is 20 or less, use (B-20). If the "Highest Number of Independent Claims in Patent (c). If "A" is greater than 20, use (B-A); If "A" is 20 or less, use (B-20). If the "Highest Number of Independent Claims in Patent (c). If the "Highest Number of Total Claims Previously Paid For" is less than 20, Write "20" in this space If the "Highest Number of Total Claims Previously Paid For" is less than 20, Write "20" in this space If the "Highest Number of Total Claims Previously Paid For" is less than 20, Write "20" in this space If the "Highest Number of Total Claims Previously Paid For" is less than 20, Write "20" in this space If the "Highest Number of Total Claims Previously Paid For" or Number of Independent Claims in Patent (c). If the "Highest Number of Total Claims Previously Paid For" or Number of Independent Claims in Patent (c). If the "Highest Number of Total Claims Previously Paid For" or Number of Independent Claims in Patent (c). If the "Highest Number of Total Claims Previously Paid For" or Number of Independent Claims in Patent (c). If the "Highest Number of Total Claims Previously Paid For" or Number of Independent Claims in Patent (c). If the "Highest Number of Total Claims Previously Paid For" or Number of Independent Claims in Patent (c). If the "Highest Number of Independent Claims Previously Paid For" or Number of Independent Claims in Patent (c). If the "Highest Number of Independent Claims Patent (c). If th | | | | | | | | | |
| Stephan J. Filipek Stephan J. Filipek | | | | | | | | | |
| Typed or Printed Name | | | | | | | | | |

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REISSUE APPLICATION BY THE INVENTORS, OFFER TO SURRENDER PATENT

Docket Number (Optional) 30-4016 REISSUE 11872-022001

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| | 9/2 | | | | | | |
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| | F = | | | | | | |
| This is part of the application for a reissue patent based on t | the original patent identified below. | | | | | | |
| Name of Patentee(s) | | | | | | | |
| Hasegawa et al. Patent Number | Date Patent Issued | | | | | | |
| 5,868,123 | February 9, 1999 | | | | | | |
| Title of Invention | ALOVOTEMO | | | | | | |
| MAGNETIC CORE-COIL ASSEMBLY FOR SPARK IGNITION | VSYSTEMS | | | | | | |
| I am the inventor of the original patent. | | | | | | | |
| I offer to surrender the original patent. | | | | | | | |
| 1. X Filed herein is a certificate under 37 CFR 3.73(b). | | | | | | | |
| 2. Ownership of the patent is in the inventor(s), and no assignment of the patent has been made. | | | | | | | |
| One of boxes 1 or 2 above must be checked. | | | | | | | |
| The written consent of all assignees owning an undivided int this application for reissue. | terest in the original patent is included in | | | | | | |
| Signature | Date | | | | | | |
| Typed or printed name | | | | | | | |
| The assignee owning an undivided interest in said original parassignee consents to the accompanying application for reissu | | | | | | | |
| I hereby declare that all statements made herein of my own k | nowledge are true and that all | | | | | | |
| statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by | | | | | | | |
| fine or imprisonment, or both, under 18 U.S.C. 1001 and that | | | | | | | |
| jeopardize the validity of the application, any patent issued the | | | | | | | |
| declaration is directed. | | | | | | | |
| Name of assignee | | | | | | | |
| AlliedSignal Inc. | | | | | | | |
| Signature of person signing for assignee | Date | | | | | | |
| RM & lus | Fibruary 7, 2001 | | | | | | |
| Typed or printed name and title of person signing for assigned | | | | | | | |

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Roger Criss, Esq., Assistant Secretary, AlliedSignal Inc.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Hasegawa et al.

Art Unit : Unknown

Serial No. : Examine

Examiner: Unknown

Filed

Title

: MAGNETIC CORE-COIL ASSEMBLY FOR SPARK IGNITION SYSTEMS

Commissioner for Patents Washington, D.C. 20231

CERTIFICATE UNDER 37 CFR §3.73(b)

Under 37 CFR §3.73(b), AlliedSignal Inc., a corporation, certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of:

- An assignment from the inventors of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel _, Frame _ on _.
- A chain of title from the inventors of the patent application identified above, to the current assignee as shown below. Copies of the assignments or other documents in the chain of title are attached.
- 1. From Ryusuke Hasegawa, John Silgailis and Donald Allen Grimes to AlliedSignal Inc. recorded in the Patent and Trademark Office at Reel 8583, Frame 0405 on June 30, 1997.

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned, whose title is supplied below, is empowered to act on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are

Applicant: Hasegawa et al.

Serial No.: Filed: Page: 2

Attorney's Docket No.: 11872-022001 / 30-40 6 US REISSUE

punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Respectfully submitted,

Date: Fibring 7, 2001

Roger Criss, Esq.

Rope A. Cin

Title: Assistant Secretary, AlliedSignal Inc.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Hasegawa et al. Art Unit: Unknown Serial No.: Not yet assigned Examiner: Unknown

Filed

Title : MAGNETIC CORE-COIL ASSEMBLY FOR SPARK IGNITION SYSTEMS

Commissioner for Patents Washington, D.C. 20231

STATUS OF CLAIMS AND SUPPORT FOR CLAIM CHANGES 37 C.F.R. §1.173(c)

This paper is being filed concurrently with the reissue application.

Claims 1-7 have not been changed. Claims 8-18 have been added. Claims 1-18 are pending in this reissue application.

New claim 8 is similar to claim 1, but does not recite that the magnetic core is iron-based, does not recite that the core includes certain metallic elements, glass forming elements or semi-metallic elements, and does not specify that the core is heat treated. Instead, claim 8 recites that the core comprises an amorphous metal, is non-gapped and has a permeability ranging from about 100 to 300. Support for these recitations can be found, for example, in col. 3, lines 13-26 of the patent specification. No new matter has been added.

Claims 9 to 11 depend on claim 8, and recite that the amorphous metal is iron based, includes boron and silicon, and that the permeability is achieved by heat treatment, respectively. Such limitations can be found in original claim 1 of the patent, for example. Claim 12 also depends on claim 8, and recites that the output in the secondary coil reaches more than 10kV with a primary current of less than about 120 amp-turns, and reaches more than 20kV with a primary current of 200 to 300 amp-turns within 25-100 µsec. Support for claim 12 can be found,

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Typed or Printed Name of Person Signing Certificate

Applicant: Hasegawa et al.

Serial No.:

Attorney's Dock

b.: 11872-022001 / 30-4016 US

Filed : 2 Page

for example, in col. 3, line 66 to col. 4, line 16, and in col. 4, lines 35-64 of the patent specification. No new matter has been added.

New independent claim 13 is similar to claim 1, but also does not include the limitations discussed above with regard to claim 8. Rather, claim 13 recites that the amorphous metal core is heat treated to have a permeability ranging from about 100 to 300. Support for this recitation can be found, for example, in col. 3, lines 3-15 and lines 52-53 of the patent specification. No new matter has been added.

New claim 14 depends on claim 13, and recites that the amorphous metal includes boron and silicon. Support for this can be found, for example, in claim 1 of the patent. No new matter has been added.

New independent claim 15 is similar to claim 1, but does not include the limitations discussed above with regard to claim 8. Rather, claim 15 recites that the amorphous metal core is non-gapped. Support for this limitation can be found, for example, in col. 3, lines 13-20 of the patent specification. No new matter has been added.

New claim 16 depends on claim 15, and recites that the amorphous metal includes boron and silicon. This is supported, for example, in claim 1 of the patent. No new matter has been added.

New independent claim 17 is also similar to claim 1, but does not include the limitations discussed above with regard to claim 8. Claim 17 instead recites that the iron-based amorphous metal core has a permeability ranging from about 100 to 300. Support for this recitation can be found, for example, in col. 3, lines 3-15 of the patent specification. No new matter has been added.

New claim 18 depends on claim 17 and recites that the amorphous metal further includes boron and silicon. This is supported, for example, in claim 1 of the patent. No new matter has been added.

The applicant has provided the status of all the reissue patent application claims, and has endeavored to indicate the support in the disclosure of the patent for the new claims being added. If the Examiner has any questions, please call the undersigned attorney at the telephone number listed below.

Applicant: Hasegawa et al.

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.: 11872-022001 / 30-4016 US

REISSUE

Respectfully submitted,

Date: 8 FEBRUARY 2001

Stephan J. Filipek Reg. No. 33,384

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